

38. A polymer feedstock according to claim 36 or 37 further comprising a plasticiser.

39. A polymer feedstock according to claim 38 wherein the plasticiser is selected from ethylene glycol, glycerine, glycerol, triethylene glycol, low molecular weight polyethylene glycols and C₂-C₈ amides.

(40). A polymer feedstock according to any of claims 35 to 39 comprising up to 20% plasticiser, by weight.

(41). A polymer feedstock according to any preceding claim further comprising a filler.

(42). A polymer feedstock according to claim 41 wherein the filler comprises inert, inorganic material.

(43). A polymer feedstock according to claim 41 wherein the filler comprises a superabsorbent material.

(44). A polymer feedstock according to claim 42 or 43 wherein the filler comprises both an inert, inorganic material and superabsorbent material.

(45). A polymer feedstock according to claim 42, 43 or 44 wherein the inorganic filler comprises calcium carbonate.

(46). A polymer feedstock according to any preceding claim comprising, by weight, up to 50% filler, up to 5% lubricant and up to 20% of a plasticizer.

(47). A polymer feedstock according to claim 46 comprising, by weight, 5-50% filler, 0.5 to 2.5% lubricant, 5 to 15% plasticizer and 40-80% PVA.

48. A polymer feedstock according to any of claim 35-47, further comprising an additional lubricant component to reduce adhesion to the polymer feedstock to surfaces.

49. A polymer feedstock according to claim 48 wherein the additional lubricant comprises a stearate.

50. A PVA-containing polymer feedstock in the form of a cold-pressed tablet or pellet comprising, by weight:-

40 to 80% PVA;
5 to 50% filler;
5 to 15% plasticizer; and
0.5 to 2.5% lubricant.

51. A polymer feedstock according to claim 50, comprising, by weight:-

40 to 70% PVA;
20 to 50% filler;
8 to 15% plasticizer;
0.5 to 1.5% internal lubricant; and
0.0001 to 0.1% external lubricant.

52. A polymer feedstock according to claim 50 or 51, wherein a fatty acid amide is provided as internal lubricant.

53. A polymer feedstock according to claim 50, 51 or 52 wherein stearate is provided as external lubricant.

54. A polymer feedstock according to claim 51 comprising, by weight:-

50 to 60% PVA;
30 to 40% stearate-coated calcium carbonate;
8 to 15% glycerol;
0.5 to 1.5% octadecanamide; and

0.0001 to 0.1% zinc stearate.

(55) A polymer feedstock according to any preceding claim prepared substantially without melting of the PVA.

(56) A polymer feedstock according to any preceding claim having a moisture content less than about 10% by weight but greater than 0.01% to bind the pellets or tablets.

57. A method of making a PVA-containing polymer feedstock comprising blending PVA with a lubricant, said lubricant including a fatty acid amide in the presence of an amount of moisture sufficient to bind the polymer feedstock into tablets or pellets upon cold pressing and cold pressing the feedstock into tablets or pellets.

58. A method according to claim 57 comprising blending, in a high speed blender, PVA with up to 5% by weight of lubricant.

(59) A method according to any of claims 56 to 58 comprising adding moisture to the components to be blended.

(60) A method according to any claims 57 to 59 wherein PVA and lubricant are fed into a high speed mixer gravimetrically.

61. A method of making a PVA-containing polymer feedstock comprising blending PVA and a filler, wherein the filler comprises a superabsorbent material.

62. A method according to claim 61 comprising blending PVA and a superabsorbent material in the presence of sufficient moisture to bind the polymer feedstock into tablets or pellets upon cold pressing.

63. A method of extruding a PVA-containing polymer feedstock comprising blending PVA and at least one of a lubricant and a filler to form a feedstock for an extrusion process, the feedstock being in the form of pellets or tablets, and extruding the feedstock into a product, wherein the feedstock is prepared substantially without melting of the PVA.

64. Use of a fatty acid amide in an amount of 0.5% to 1.5% by weight as an internal lubricant together with use of an external lubricant in an amount of 0.0001 to 0.1% by weight in the manufacture of a cold-pressed polymer feedstock containing PVA and up to 50% filler wherein the feedstock is manufactured by cold pressing into pellets or tablets using residual moisture to bind the pellets or tables and substantially without melting of the PVA.

Respectfully submitted,

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